UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/005,942	11/08/2001	Jens Rennert	US018182	7782

7590 02/17/2005

Corporate Patent Counsel
Philips North America Corporation
580 White Plains Road
Tarrytown, NY 10591

EXAMINER	
GHULAMALI, QUTBUDDIN	
ART UNIT	PAPER NUMBER
2637	

DATE MAILED: 02/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/005,942	RENNERT ET AL.	
	Examiner	Art Unit	
	Qutub Ghulamali	2637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-31* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/14/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. Claims 1-21, 22-26, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The invention as recited in the above claims is merely an abstract idea that is not within the technological arts. Mere ideas in the abstract (i.e., abstract idea, law of nature, natural phenomena) that do not apply, involve, use, or advance the technological arts fail to promote the "progress of science and the useful arts" (i.e., the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. In the instance case, none of the aforementioned claims are recited as within technological art such as being carried out on a computer system.

A second requirement for a claimed to be statutory under 35 U.S.C. 101 is that the claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F. 3d at 1373, 47 USPQ 2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F. 2d 1197, 1200-03, 26 USPQ 2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful. Apart from the utility requirement of 35 U.S.C. 101, usefulness

under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F. 2d at 1057, 22 USPQ 2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

Assuming that the claimed invention is carried out on a computer (i.e. rendering the claimed invention in the technological art), it is asserted that the Subject Matter as claimed fails produce a "useful, concrete and tangible result."

The claimed invention(s) highlighted above relate to a method of manipulating bit word extraction in bit groups as per the objective recited in the preamble.

Claims 1-21 and 22-26, recite abstract idea "using steps of passing bit words of a first portion into a second portion". However, the claims fail to provide any practical application of the abstract idea. The claims merely recite passing N bits of data words over M bit channel. Note that, even if the claims recite limitations of passing bits of data words from a first portion into a second portion in some quantitative manner, mere choosing the transfer of data bits as claimed fails to produce a concrete and tangible result.

The applicant is required to thoroughly review all claims in light of this analysis and take appropriate corrective action.

In conclusion, claims 1-21, 22-26, are rejected as being directed to anon-statutory subject matter under 35 U.S.C. 101.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 14 and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 14 and 29, recites the limitation "the second rate being faster than the second rate" in line 4. There is insufficient antecedent basis for this limitation in the claims.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-13, 15, 22-23, 27, are rejected under 35 U.S.C. 102(e) as being anticipated by Hwang et al (US Pub. No. 2003/0048852).

Regarding claims 1, 22, and 27 Hwang discloses a method and system comprising the steps of:

passing N-bit word data over an M-bit channel, M being less than N, each N-bit word having a first portion and a second portion (Col. 4, sections 0032, lines 1-6),

transferring the first portion of each of X words in M-bit groups, X being at least two (abstract; col. 4, sections 0032, 0033); and

transferring at least one other bit group, the at least one other bit group including bits from the second portions of at least two of the X words (col. 4, section 0033).

Regarding claims 2 and 23, Hwang discloses joining, for each of the X words, the second portion to the corresponding transferred first portion, the second portion being extracted from the transferred at least one other bit group (col. 4, section 0033, lines 17-25; col. 12, section 0087).

Regarding claim 3, Hwang discloses the first portion includes M bits of encoded information, and the second portion includes encoding information (col. 12, section 0086, lines 10-12; section 0087)

Regarding claim 4, Hwang discloses second portion further includes DC content balancing information (col. 1, section 0008; col. 5, section 0035, lines 15-20).

Regarding claim 5, Hwang discloses N is 10 and M is 8 (col. 12, section 0087).

Regarding claim 6, Hwang discloses the M-bit channel includes a Digital Visual Interface (DVI) portion (col. 1, section 0012).

Regarding claims 7, 8 and 9, Hwang discloses the first portion is a most significant bits portion, and the second is a least-significant bits portion (col. 5, section 0036).

Regarding claims 10 and 11, Hwang discloses X is an integer and multiple of M/(N-M) and that x is 4 (col. 5, section 0036, lines 18-39).

Regarding claims 12 and 13, Hwang discloses the bit length of the first portion is an integer multiple of M (col. 5, section 0036, lines 1-10).

Regarding claim 15, Hwang discloses the at least one other group includes M bits (col. 5, section 0036, lines 1-12).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 14, 16-21, 24-26, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang et al (US Pub. No. 2003/0048852) in view of Epstein et al (US Patent 5,802,392).

Regarding claims 16, 25, 30, Hwang discloses every feature of the claimed invention but is silent regarding N-bit word transfer at a first rate, transferring at a second rate, the second rate being at least as fast as the first rate. Epstein discloses a system of transferring N-bit word at a first rate, transferring at a second rate, the second rate being at least as fast as the first rate (abstract; col. 2, lines 30-41). It would have been obvious to one skilled in the art at the time the invention was made to use the transfer of bit words at a rate to another rate as taught by Eptein in the system of Hwang because it can facilitate the transfer of data from one rate to another using existing bus architecture.

Regarding claims 14, 24 and 29, Hwang discloses every feature of the claimed invention but is silent regarding storing the N bit word data in X locations at a first rate, each location

being N-bits wide, wherein each N-bit word is stored in one of the X locations, and transferring includes reading from the X locations at a second rate. Epstein in a similar field of endeavor discloses storing the N bit word data in X locations at a first rate, each location being N-bits wide, wherein each N-bit word is stored in one of the X locations, and transferring includes reading from the X locations at a second rate (col. 6, lines 39- 49; col. 7, lines 41-52). It would have been obvious to one skilled in the art at the time the invention was made to use storing the bit word data at locations and data retrieve capability from the stored locations as taught by Eptein in the system of Hwang because it can facilitate read/write operation and transfer of data in an efficient manner.

Regarding claim 19, Hwang discloses every feature of the claimed invention but is silent regarding X words are transferred in a sequence corresponding to an order by which each X words was provided. Epstein in a similar field of endeavor discloses a sequential transfer of data (figs. 2, 4) wherein words are transferred in a sequence corresponding to an order by which each word was provided (abstract; col. 2, lines 1-14). It would have been obvious to one skilled in the art at the time the invention was made to use a sequential transfer of data corresponding to an order by which each word was provided as taught by Eptein in the system of Hwang so as to aid in the transfer of data between devices in an efficient manner.

Regarding claims 20, 26, 31, Hwang discloses every feature of the claimed invention but is silent regarding transfer X N bit words in a first storage element and arranging for transfer, while transferring the first portion of each X words and at least one other bit group, another X N bit words in another storage element. Epstein in a similar field of endeavor discloses transfer X N bit words in a first storage element and arranging for transfer, while transferring the first

portion of each X words and at least one other bit group, another X N bit words in another storage element (col. 5, lines 6-31; col. 7, lines 41-52; col. 9, lines 4-34). It would have been obvious to one skilled in the art at the time the invention was made to transfer X N bit words in a first storage element and another X N bit words in another storage element as taught by Eptein in the system of Hwang because it can provide faster access to data and data storage having different data rates.

Regarding claim 17, Hwang discloses the second rate is faster than the first rate (col. 3, section 0027).

Regarding claim 18, Hwang discloses the second rate is N/M times faster than the first rate (col. 3, section 0027).

Regarding claims 21 and 28, Hwang discloses joining, for each of the X words, the second portion to the corresponding transferred first portion, the second portion being extracted from the transferred at least one other bit group (col. 4, section 0033, lines 17-25; col. 12, section 0087).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patents:

Dill et al (US Patent 4,667,305) shows circuits for accessing a variable width data bus.

Epstein et al (US Patent 5,802,392) discloses system for transferring double word data sequentially into two sequential 16-bit words.

Pasqualino (US Pub. No. 2002/0163598) discloses digital visual interface supporting transport of audio and auxiliary data.

Publications:

High-bandwidth Digital Content Protection System Revision 1.0 Erratum, by Intel Corporation, March 19, 2001, pages 1-9.

Upstream Link for High-bandwidth Digital Content Protection, Revision 1.00, by Intel Corporation, January 26, 2001, pages 1-38.

Lieberman, David "PC Video Interface Looks to Add Audio Capability, EE Times (03/26/01, 11:257 am. EST), pages 1-3, downloaded from the Internet on May 23, 2001 from http://www.eetimes.com/story/OEG20010326S0029.

Silicon Image, Inc., "Silicon Image First to Couple Digital Audio and Video on the DVI Link", Sunnyvale, January 16, 2001, pages 1-4, downloaded from the Internet on May 22, 2001 from http://www.siimage.com/press/01 16 01.asp

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday from 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.
February 4, 2005.

JAY K. PATEL
SUPERVISORY PATENT EXAMINER